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ABSTRACT

Studies of listening in the past have almost consistently been of the observer type, where participants watch a videotape and/or listen to an audio tape as stimulus material. However, a more accurate measure of true listening ability can only be done in an interactive setting. A study measured relational listening (an individual's ability to understand the other conversant, realize that they have been understood, and feel that they have been understood), and examined gender sex types as possibly more accurate predictors of individual differences than biological sex. Subjects, 136 undergraduate speech students at a mid-size southern university, participated in conversation with one another and were then tested on their understanding of the other. Results showed: (1) no gender differences, confirming findings that there are no systematic differences in listening superiority between the biological sexes; and (2) that sex-typed females were more accurate than sex-typed males at realizing when they had or had not been understood, thus indicating that feminine processing more effectively utilizes both content and relational message material to understand and be understood in conversation. (One table of data is included; 42 references are attached.) (SR)

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Interactive Listening: An Examination Of Listening Ability and Gender Differences in an Interactive Conversational Context

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Abstract

Studies of listening in the past have almost consistently been of the observer type, where participants watch a video tape and/or listen to an audio tape as stimulus material.

It is argued that without being involved in interactive listening, the participant in these studies is in a unique listening situation. It is posited that a more accurate measure of true listening ability can only be done in an interactive setting.

This study attempts to provide a measure of listening by dyadic examination. Subjects participated in conversation with another and were then tested on their understanding of the other.

Further, gender sex types were examined as possibly more accurate predictors of individual differences than biological sex. Findings indicated that this may be the case. Further research is encouraged in the areas of interactive listening and gender as sex type in communication.

Introduction

Many studies of listening and listening assessment instruments assume that the act of listening while engaged in conversation, interactive listening, is cognitively equivalent to the act of listening to an audio or video simulation of conversation (Housel, 1985; Stafford, Waldron, & Infield, 1989). In these studies, participants watch and/or listen to speakers rather than participate. However, Sillars (1986) argues that the "interpersonal perceptions of the observers in typical studies of social perception should differ markedly from those of conversational participants". Farr and Anderson (1983) assert that an entire set of different cognitive demands are placed on the listener in an interactive communication setting. Rhodes (1987) also agrees that, "to examine listening is to examine a transactional process between speaker and listener".

One very important set of demands in interactive listening is motivation. The motivation factor can be divided into two parts: the motivation to exchange information and the motivation to manage impressions (Stafford, et al., 1989).

In the interest of impression management, particularly in initial interactions, participants often suppress or conceal information from their partners

during conversation (Kellerman, 1983; Kellerman & Berger, 1984; Stafford, et al., 1989). Since the information provided by each participant tends to be emotionally laden as well as factually detailed, it is this hidden information that is usually the most truly informative. It would follow that an active listener, engaged in an interactive setting, would be attempting to get at that dimension. This requires participants in conversation to always listen in order to protect their own image, and disclose the correct information to portray a favorable impression, activities not relevant in listening to simulated conversation.

There is also the information exchange that takes place in conversation to determine a conversant's understanding of his or her partner as well as to ascertain the partner's understanding of the conversant (Berger & Calabrese, 1975). As the partners converse, certain inferences are made about the individual's values, beliefs and general personality. In order to confirm or disconfirm these inferences, the conversational partners have a need to continually add to their known information of one another and use this exchange of information to more accurately determine the characteristics of each other (Kellerman, 1986). While a partner is eliciting new information, he or she is also

determining what new personal information to divulge. It is a logical extension to say then that listening in this process is primary to gaining that information.

Contemporary listening tests do not provide for the types of dynamic, interactive listening necessitated in conversation. Typically, the participant is the observer in a non-interactive setting and lacks the motivations for impression management or information exchange. Attempts to provide alternate motivations for listening such as high grades (Heinberg, 1961) or money (Sewell, 1985) have produced increased performance. However, high marks or monetary compensation are quite different motivations than those found in ordinary conversation. The interactive dimension, the aspect of relationship in communication, is nonexistent when examining pragmatic rewards such as money or grades. It would be more accurate perhaps to examine the relational reward system in communication; the function and motivation of establishing and maintaining various relationships. As such, any test of conversational listening would have to deal with the ability to manage the relational problems inherent in conversation.

Relational Communication

In its broadest sense, relational communication can be thought of as "the process by which people define

their relationships through communication and how, in turn, communication reflects those definitions" (Planalp, 1985). People enter into interpersonal interactions with some sense of what communicative behaviors, both verbal and nonverbal, are appropriate for the type of relationship they anticipate or desire. Penman (1980) points out that the entire nature of a relationship is deduced from the communicative exchanges between partners.

As illustrated above, the verbal elements in a non-interactive setting are stripped of the normal ~~elements~~, ~~i.e.~~ motivations, a listener would use in the more realistic interactive setting. A second problem that exists in the instrumentation of past research is that it excludes most nonverbal behavior and situational context (Rubin, Daly, McCrosky, & Mead, 1982; Rubin & Roberts, 1987). In a test presented to numerous participants at one time, as most current listening tests are presented, the normally existent, physical, nonverbal cues we use and respond to are impossible to represent because they are an outgrowth of the individual conversation, or listening scenario, in which we are engaged. Burgoon (1985) states that these nonverbal signals have a significant function in the cognitive processing of messages and social information.

Since an important component of listening is understanding (Barker, 1979) and cognitive processing is an integral part of understanding, it stands to reason that nonverbal behavior would be indispensable in this process. For one reason, we must consider that in a normal listening situation, be it lecture or interpersonal conversation, we receive a tremendous quantity and flow of information. It has been argued that this information is processed or encoded by "chunking" the information into phonemic (or thematic) clauses (Boomer, 1965). It has also been argued that nonverbal cues are intrinsic in this grouping process (Dittman, 1972). Further, Riceborough (1981) has found that nonverbal illustrator gestures on the part of the speaker may contribute to comprehension and recall, both vital components of listening.

The implications of this situation are clear. Studies should be designed relating the importance of nonverbal information in cognitive processing with the cognitive processing of listening. Current tests such as the Kentucky Comprehensive Listening Test (Bostrom & Waldhart, 1983) and the Watson-Barker Listening Tests (Watson & Barker, 1984) attempt to use some paralanguage cues as a non-verbal component. It is questionable at best whether those paralanguages are effective

considering the unique presentation context in which they exist. Given that these cues are effective, there are still many aspects of nonverbal communication (parakinesis, proxemics, vocalics, for instance) that may be intrinsic to message processing but are absent from listening tests.

The ability to devise such tests is basically limited by the primitive nature of the theories describing how verbal and nonverbal elements in a message are related to each other. Previous research has shown that those who use nonverbal cues effectively also receive them more effectively (Knapp, 1978). If this is true, it would stand to reason they may listen more effectively as well.

Direct and Indirect Messages

The important part played by all of the nonverbal cues in conversation is in aiding the clarification, classification and interpretation of the message. Although there are speaking situations that are void of any real feedback component, there are very few if any listening situations that have no feedback because listening implies the existence of another to whom we are listening.

A conversation requires constant attention and evaluation of the spoken, direct message as well as the

more indirect message. This evaluation includes "What is the speaker's intent?", "What does this mean to me?", and can trigger an emotion in the listener (deRivera, 1977). Indirect messages such as the emotion of the speaker as exhibited through nonverbal cues, tints the message and can provide ambiguous content. This content may not be adequately interpreted without the nonverbal cues, but in the majority of our real-life experiences, the nonverbal cues are present. It is not a leap to suppose that we learn to identify and alter the message when listening according to the nonverbal modifiers present. If this is the case, it follows that the nonverbal or indirect messages contribute greatly to our mutual understanding in conversation.

Methodology

As stated previously, current listening tests do not provide a measure of the interactive, relationally oriented listening that takes place during conversation. Yet, many researchers have demonstrated that interpersonal impressions from conversation are at least as lasting as reproductions of specific content (Stafford, Burggraf, & Sharkey, 1987; Stafford & Daly, 1984). In addition to recalling literal content, conversational listening provides for attribution, evaluation, elaboration, and misperception from which we

construct and reconstruct our impression of others (Stafford, Waldron, & Infield, 1989).

With these attributions, evaluations, and so on, individuals are constantly updating what they think about others, what others think about them and what others think they are thinking about the others (Laing, Phillipsen, & Lee, 1966). Social theorists have proposed that listeners may not rely on the specific information acquired from social situations for understanding, but on the impressions derived from combining such information with existing cognitive structures (Hamilton, 1980; Hastie, 1980; Wyer & Srull, 1980). These impressions then may more be the goal of the listener than the individual utterances of the speaker. If so, a measure of understanding, realization of being understood and feeling understood may be accurate indicators of an active, successful listener.

Bartlett (1932) in his seminal work on cognitive processes, identified the framework of an individual's cognitive processing as schema. According to Bartlett, schemata produce systematic influence on memory and an individual's determination of what is important in a message because "people do not reproduce from memory 'what was', but at least partly reconstruct 'what was' based on 'what must have been'" (Bartlett, 1932). This

reconstruction attempt has led researchers to discover memory errors based on schemata for texts (Bower, Black, & Turner, 1979; Steing & Glenn, 1979), persons (Cantor & Mischel, 1979), and social structures (Picek, Sherman, & Shiffrin, 1975; Spiro, 1980).

A second definition of schemata as provided by Craik (1979) states that an individual's schema is a conceptual framework, built on the basis of experience, "...which allows interpretation and comprehension of novel events" (p.64). Planalp (1985) puts this concept in terms of interactive dynamics by explaining that relational schemata are coherent frameworks of relational knowledge that are used to derive relational implications of messages and are modified in accord with ongoing experience with relationships.

To date, very little research has been attempted to discover the link between interactive listening, which would by its very nature be relational, and relational schemata. In one relevant study, Hastie (1981) reviewed a large body of work relating schemata and memory. He concluded that memory for schema-congruent events and for schema-incongruent events is more accurate than memory for moderately congruent or schema irrelevant events.

In recent research on sex differences and listening, Thomas (1991) reported that gender schema, and

individual's cognitive process related to masculinity and femininity, may affect memory recall in contemporary listening tests. In a comprehensive review, Thomas cited a large number of studies using observer oriented tests which indicated that there was no significant listening differences between males and females, while others reported male superiority and still others found females superior listeners. Consistently, studies reported that males were superior in listening to factual, content oriented messages while females were superior in listening when the stimulus was more relationally oriented.

This study indicated that females were more successful in relational listening than were males. However, there were no significant differences for biological sex in content listening but significant differences did exist between gender sex roles. Specifically, cross-typed males, males scoring high on femininity and low on masculinity, were poorer listeners than all other sex types. For the purpose of the current study, only sex-typed and cross-typed individuals will be examined.

Relational listening in this study was measured, as with research cited earlier, by means of scores on a non-interactive listening test. In the current study,

relational listening will be constructed as an individual's ability to understand the other conversant, realize they have been understood, and feel that they have been understood. On that basis:

H1: Across all test conditions there will be a significant difference in male scores vs. female scores such that females will score significantly higher in measures of understanding, realization of understanding, and feeling understood.

Since previous research has indicated a tendency for females to be better relational listeners, and since the variables on the TCUA involve relational as well as content information, it is expected that:

H2: On a score of understanding, realization of understanding, and feeling understood, a significant correlation will occur such that scores on femininity will correlate significantly with scores on UND, RLZ and FEEL.

Finally, as an attempt to replicate previous listening and gender sex type research concerning the performance of the cross-typed male:

H2: A significant difference will exist between gender sex roles such that cross-typed males will score significantly lower than all other sex types in understanding, realization of understanding, and feeling u n d e r s t o o d .

Procedure

Participants were 136 undergraduate speech students at a mid-size southern university and were offered extra credit to participate in the current study. If these participants, 79 were male and 57 were female. Two months earlier, all students had taken the Watson-Barker Listening Test.

The experiment was conducted on two nights and required approximately one hour and fifteen minutes to complete. Participants arrived at the staging area in intervals of thirty minutes with as many as sixteen participants arriving at one time. As the students were greeted, they were sent into a single room to await further directions. They were asked at that time to sign a sheet with their name and the name of their speech instructor.

When all participants had arrived for a particular sign-up time, an experimenter entered the room and welcomed them. The experimenter then took the sign-up

sheet and formed dyads as randomly as possible making sure that the partners in each dyad were not students of the same speech class. Further, each partner in a dyad was asked if he or she know the other partner. When it was determined that this would be an initial interaction for each partner, the dyads were randomly separated into three rooms for the next phase of the experiment. Because it was imagined that a mixed sex couple may cause undue apprehension, an effort was made to pair the dyads by same sex in this study. Any time an odd number of participants attended a session, the lone individual was asked to sign an extra credit sheet and then dismissed.

The three rooms provided two conditions for study. In each of two rooms, participants were given dyad numbers followed by either a "1" or "2" to indicate participant number within dyad. Participants were then provided with the preparation segment of the Thomas Conversational Understanding Assessment (TCUA) which consisted of four envelopes, each containing a scenario to discuss. These scenarios provided for an event to have taken place such as witnessing an automobile accident while late for a class or spending a windfall profit. Each dyad was informed that they had ten minutes to get to know each other. They were

instructed to open each envelope, discuss the scenario and then continue through the remaining envelopes. The participants were informed that this was an examination of conversation, therefore, with any remaining time after they discussed the scenarios, they were free to discuss whatever they wished., Participants were reminded that, although they were in a large room, at least two other couples would be doing the same exercise so volume and distraction should be kept at a minimum.

In the third room, participants were also given dyad and participant numbers. In this condition, participants were informed that this was an examination of conversations so, for ten minutes they were to get to know each other through conversation. These participants were also cautioned about volume and distraction. No further instruction or direction was provided for these participants.

At the end of ten minutes, participants in all three rooms were told to cease conversation. All participants with a dyad number indicating partner "1" were sent to one room and all with partner "2" were sent to another. This separation was to insure that partners could not collaborate while answering the later questionnaires.

At this time, the experimenters presented the participants with a questionnaire which included the Bem Sex Role Inventory (Bem, 1974). Participants were briefed on the semantic differential scales used with the questionnaire and told that one more questionnaire would follow when all had completed. The participants were also informed that no talking was to take place and an assistant was left in each room to monitor the participants. After twenty minutes, the experimenters entered the rooms again. After determining that all were indeed finished, the experimenter explained that the final questionnaire, the TCUA, was to be administered.

The TCUA was derived from a test by Laing, Phillipsen & Lee (1966) used to determine understanding between partners. The TCUA contains six scenarios, four of which had been topics of discussion for two-thirds of the participants.

Each scenario was listed three times in the questionnaire. Following each scenario were five possible reactions to the scenario that the participant could possibly perform. With each option was a nine-point scale ranging from strongly disagree to strongly agree. Participants were informed that they were not necessarily to choose one over all others, but rather

to rate each option in accordance with their agreement or disagreement with that option.

The first time a scenario was presented, participants were to rate the answers according to their own personal response. Following this, the exact same scenario was presented again with the same options. On this presentation, the participants were asked to guess the responses of their conversational partner. The third time each scenario was presented, the participants were asked to report what they imagined their partner guessed they would respond.

To alleviate undue questions from the participants, the experimenters then explained that for some individuals, some of the topics would be familiar but for others, none would be. It was explained that this was not a mistake and that participants should guess each answer as best they could. Participants were then informed that a research assistant would again be monitoring the room. For the TCUA, once a participant answered one page, he or she was not to go back and refer to that page later.

Participants were then thanked for their participation and informed that their various instructors would receive notification of their earned extra credit points. When finished, the participants

were to give both questionnaires to the research assistant and then were free to go. At that time, the experimenters left the room and met with the next group of participants to begin phase one of the experiment again.

Results

The first comparison conducted was to determine if the manipulation of the TCUA was successful. A MANOVA was performed on participant scores examining condition (discussed vs. non-discussed scenarios) by gender sex type (sex-typed male (MS), sex-typed female (FS), cross-typed male (MC), and cross-typed female (FC)). The results indicated a significant difference between condition for all three independent variables (UND, F = 9.69, df = 1,3, p. = .002; RLZ, F = 12.09, df = 1,3, p. = .001; FEEL, F = 1.85,df = 1,3, p. = .007).

A follow-up analysis indicated that there were no significant differences between gender sex types for non-discussed scenarios. However, significant results did exist between gender sex-types for all independent variables in the discussed scenario condition (UND, F = 9.44, df = 1,3, p. = .003; RLZ, F = 11.27, df = 1,3, p. = .001; FEEL, F = 7.5, df = 1,3, p. = .008). Based on these findings, the manipulation was clearly successful and further analysis warranted.

To examine hypothesis one, scores on UND, RLZ and FEEL for females (n=57) were compared to male scores (n=79). This hypothesis was not confirmed as there was no significant difference between gender for any of the independent variables.

Hypothesis two ~~noted~~ posited that, based on the dimensions of conversational listening examined, femininity should correlate highly with UND, RLZ and FEEL. This hypothesis was confirmed based on the significant correlations with femininity and the independent measures (UND, r = .27, p. = .001; RLZ, r = .22, p = .01; FEEL, r = .25, p = .02).

Hypothesis three attempted to replicate previous listening and gender sex type research by assuming that cross-typed males would score significantly poorer than all other sex types in UND, RLZ, and FEEL. This hypothesis was not confirmed. However, a significant difference did exist such that sex-typed females scored significantly higher than sex-typed males. Means and standard deviations for all groups are shown in Table One.

Although not all differences were significant, the hierarchy of responses for each TCUA variable is of interest. As also reflected in Table One, sex-typed males scored highest in all three variables followed by

cross-typed females, cross-typed males and sex-typed males.

Discussion

The results of this study, although not all completely expected, are of interest to listening examination. The fact that no gender differences were indicated seems to once again confirm the findings that there are no systematic differences in listening superiority between the biological sexes.

However, the discovery that sex-typed females are more accurate than sex-typed males at realizing when they have or have not been understood does seem to indicate a feminine/masculine difference. This assumption also has a good fit with the finding that femininity overall was a good predictor of performance on the TCUA. When examining trends, it appears that the feminine processing of information in listening may lead to better listening in an interactive context. It may be more accurate to say that feminine processing more effectively utilizes both content and relational message material to understand and be understood in conversation.

Previous electrophysiological research has indicated at least one possible reason for this. It has been reported that the corpus callosum, which

serves to transfer information from one hemisphere of the brain to the other, is larger for females than for males (deLacoste-Utamsing & Halloway, 1982). It has also been reported that cognitive functions depend primarily on either the right or left hemisphere of the brain. In most right-handed individuals, the left hemisphere is the rational lobe. It processes logical information and is concerned with speech, math and other analytical tasks. The right hemisphere is the more intuitive lobe. It processes more abstract information and is concerned with imagery, spatial tasks, creative tasks and the like (Andersen, Garrison, & Andersen, 1979; Sage, 1967).

Safer (1981) claims that women tend to process speech differently than men. Women seem to process language through both hemispheres which allows a closer integration of both verbal and nonverbal codes. Men seem to process language in the left hemisphere which does not allow for the same integration of verbal and nonverbal codes. Therefore, since emotions are processed primarily in the right hemisphere, men may not be able to connect words to feelings as easily or effectively as women (Watson & Rhodes, 1991). Since one can assume this connection would be necessary in the full understanding of most discourse, it would make

sense that male gender, not masculinity, would be a predictor of performance in a conversational understanding task. However, those men making the attempt to coordinate both hemispheres, the cross-typed males, may be more successful than the traditional male (Thomas, 1991).

This study has several weaknesses that should be acknowledged. First, there was no examination in this study of the undifferentiated or androgynous individual. Further research should determine whether these sex types are significantly different with regards to the understanding variables.

Second, the conversation time allowed in this study may have been too long. Although during the validation of the TCUA it was determined that twelve minutes would be appropriate, post hoc conversations with participants in this study indicated that even ten minutes was more than enough time to determine each other's understanding.

One thing that seems fruitful from this research is the use of the TCUA to measure interactive listening. Further research should attempt to replicate previous non-interactive listening research in light of conversation. There is little doubt that observation based testing measures some particular

aspects of listening. By observing both interlocutors in an interactive setting, some inconclusive studies, such as those concerning gender and listening, may become elucidated.

TABLE ONE

		UND		RLZ		FEEL	
Source	N	MEAN	SD	MEAN	SD	MEAN	SD
FS	11	1.86	0.52	*1.74	0.58	0.78	0.37
FC	13	2.11	0.46	1.95	0.41	1.01	0.47
MC	16	2.25	0.94	2.13	0.95	1.09	0.51
MS	12	2.37	1.04	*2.18	1.04	1.77	0.93

* = significantly different at the .05 level.

Note: Scores are listed in order of superiority. The lesser the numerical value of the score, the higher the performance on that variable.

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